

# Is it just semantics? Medical students and their 'first patients'

Natalie Cohen

Medical School, Icahn School of Medicine at Mount Sinai, New York, NY 10029, USA

## Correspondence to

Natalie Cohen, Icahn School of Medicine at Mount Sinai, New York NY 10029, USA; [natalie.cohen@icahn.mssm.edu](mailto:natalie.cohen@icahn.mssm.edu)

Received 2 April 2017

Revised 10 February 2019

Accepted 12 February 2019

Published Online First

2 March 2019

## ABSTRACT

There have been multiple factors involved in the decline of the anatomy course's central role in medical education over the last century. The course has undergone a multitude of changes, in large part due to the rise in technology and cultural shifts away from physical dissection. This paper argues that, as the desire of medical schools to introduce clinical experiences earlier in the curriculum increased, anatomy courses began implementing changes that would align themselves with the shifting culture towards incorporating humanistic values early on in the medical curriculum. One of these changes, argued as a product of this shift, included calling a cadaver a 'patient' and introducing the cadaver as a student's 'first patient'. This change has been seen in different universities and textbooks. This paper argues that the use of the words 'patient' to describe the cadaver in order to promote principled habits in medical students may in fact create an environment that does the opposite. By equating an environment in which the subject of dissection is lifeless and incapable of participation, and the space is discouraging of emotions and conducive to untested coping mechanisms to the clinical environment through using the word 'patient', values like detached concern, a controversial practice in medicine, can be implicitly encouraged. An ethical analysis of the use of the word 'patient' to describe the cadaver shows that this practice can promote unethical habits in students and that changing this aspect of anatomy lab culture could improve ethical dispositions of future physicians.

## INTRODUCTION

Cadaver dissection is a near universal rite of passage for medical students. Early in their education, students enter a room full of dead bodies to learn about human biology through dissection. The anatomy course has endured many changes in medical education; this paper argues that it has evolved from its original purpose as a vital tool to students' understanding of anatomy to fit into the shifting culture of medicine. A major change in anatomy courses in the early 21st century has been the embrace of the word 'patient' to refer to a cadaver and characterise it as a medical student's 'first patient'. Using the word patient allows for the cadaver dissector to have an eye towards clinical care, which invokes an environment of professionalism, respect for the human body and ethical habits in medical students, such as the ability to engage with patients empathetically. Although there is much research on anatomy courses and the experiences students have in them, this relatively new way of describing cadavers has not been scrutinised. This paper analyses the ethical impact of referring

to a cadaver as a 'patient', a practice employed in medical schools in the USA and in some schools across the globe. This paper shows that there are other ways to engender respect towards cadavers without calling them 'patients'.

## HISTORY

Cadaver dissection began approximately 500 years ago as a method of research before evolving into a means to teach medical students about the body.<sup>1</sup> As cadaveric dissection became part of the early training of physicians, it came to be regarded as 'essential to medical practice' and was treated as such until the mid-twentieth century.<sup>2-3</sup> Around 1960, the landscape of medical education changed; developments in anatomical teaching tools supplemented cadaveric dissection with models, simulators and prosection. With these new developments, dissection was no longer regarded as the best method to learn anatomy.<sup>4-5</sup> At the same time autopsy lost its centrality as an essential diagnostic tool, the question of whether dissection was vital to learning anatomy jeopardised the anatomy course's role in medical education.<sup>1-4</sup>

Also in the mid-20th century, there were concurrent changes in medical education; students were responsible for mastering immense amounts of new material, and there was a strong shift in medical pedagogy towards teaching with the clinical setting in mind.<sup>4-5</sup> Developments in science and medicine nearly doubled the material to be learnt, necessitating increased curriculum hours in the molecular and biological sciences. This along with an increase in the use of tools such as models and imaging spurred a dramatic reduction in the total hours for anatomy courses.<sup>6</sup> In addition, there was a new emphasis on early clinical exposure and care. Many medical schools, particularly those in the USA, overhauled their curriculum in the last three decades to allow students the earliest exposure to clinical settings possible.<sup>7</sup> Thus, it could be argued that 21st-century medical education reform prioritising clinical exposure during the preclinical years clouded the purpose of gross anatomy. Today, the anatomy curriculum in many places particularly emphasises clinical values and patient care. New instructional approaches include introducing the concept of death to students before they enter the lab and conducting memorial services for those who donated bodies. Though anatomy lab remains part of the curriculum, it had to 'evolve according to the particular societal and professional demands of [the] time'.<sup>8</sup>

Amidst this curricular shift towards humanistic development, the word 'patient' was introduced to



© Author(s) (or their employer(s)) 2019. No commercial re-use. See rights and permissions. Published by BMJ.

**To cite:** Cohen N. *J Med Ethics* 2019;**45**:411–414.

describe the cadaver which, as this paper argues, may reflect an attempt to preserve anatomy's relevance in the changing landscape of medical education. By calling the cadaver a patient, anatomy seems more clinical, fitting into the new culture of medical education. The word is first presented in introductory lectures, and textbooks and faculty reinforce its use. *Grant's Dissector*, a leading anatomy textbook, contains a section entitled, 'Your First Patient', which states, 'The cadaver must be treated with the same respect and dignity that are usually reserved for the living patient'.<sup>9</sup> Previous editions of *Grant's Dissector*, in print since 1940, used the word 'subject' to describe the cadaver; the use of the word 'patient' began with the 13th edition in 2005.<sup>10</sup> The use of 'patient' is reflective of the changing medical education culture that has a constant eye towards the clinical environment; it encourages students to develop a respectful relationship with their cadaver, a habit, which if developed in the anatomy course, reinforces body dissection's essential place in the clinically oriented medical school curriculum.

If this is the case, and the introduction of the word 'patient' was a reaction to changing priorities in medical education, it was not analysed prospectively. The word 'patient' taps into students' ideas about their careers, how they will act as physicians, and how they will relate to their future, living patients. While the use of 'patient' connects students to the goal of patient care, it elides stark differences between anatomy lab and the clinical environment. The next section argues why this lexical choice misrepresents patient care and may foster ethical dispositions that undermine the explicit teachings of the humanistic curriculum.

## MEDICAL SOCIALISATION

It is impossible to grapple with this issue without discussing the professional socialisation that occurs in the hidden curriculum of medical school. Medical socialisation involves inheriting norms, values and ideologies associated with the profession, which occurs in and out of the lecture hall. The literature has documented that values and normative expectations are transferred through the educational setting, and many behaviours and attitudes towards patients, even if not explicitly taught, are cultivated through this process.<sup>11 12</sup> While medical students' training includes explicit lessons about humanistic patient care, there are certain values—observed in role models, course directors and the environment—that influence students' perceptions of what it means to be a physician. Because this implicit, hidden curriculum is not part of the formal curriculum evaluation process, ethicists and medical educators should consider what effect it might have on the moral and professional development of medical students during their training.

Using the word 'patient' to refer to a cadaver overtly compares cadaveric dissection to patient care and the student–cadaver relationship to the doctor–patient relationship, but the environment, moral culture and emotional demands of cadaveric dissection differ greatly from patient care. Analysing how these domains differ demonstrates that using the word 'patient' to describe a cadaver does not take the hidden curriculum into consideration and may promote unethical habits in medical students as they are first socialised into the profession.

## INTERACTIONS WITH CADAVERS VERSUS INTERACTIONS WITH PATIENTS

There are significant differences between a patient and a cadaver. Most obviously, while a patient is a living, breathing human, a

cadaver is a dead body. A patient has a medical and social history, while a cadaver's history is reduced to initials, age and cause of death. In addition, there is a clear distinction between the value of patient confidentiality in patient care versus in the cadaver lab. Though medical education prizes using real patients to teach medical students, patient information is virtually never incorporated into the cases to comply with US laws enacted to protect patient information. In contrast, anatomy students are encouraged to walk around the lab learning about the medical issues of cadavers whose information has only been semianonymised, and there is no monitoring protocol for how students should share this information.

These differences correspond to differences between the doctor–patient relationship and the student–cadaver relationship. For example, while the doctor–patient relationship develops through communication, the student–cadaver relationship is one sided. While a patient chooses his or her doctor and advocates for himself or herself, the cadaver has no input on which students will conduct the dissection or how. Since the mid-20th century, the ideal doctor–patient relationship has evolved from a paternalistic one, in which the doctor independently makes decisions for the patient, to a partnership in which the doctor and patient collaborate. The student–cadaver relationship does not allow for this type of collaboration. Lastly, while throughout an examination, a doctor maintains a patient's modesty through draping parts of his or her body unrelated to a procedure; in anatomy lab, there is no similar precaution. While overtly discouraged in most anatomy labs, oftentimes for sheer convenience the sheet is pulled off the cadaver completely, and it lies naked until the day's dissection is over.

At the end of a doctor's treatment, ideally the patient is improving; in contrast, at the end of the anatomy course, students have not helped their assigned cadaver. At the end of the course, the bodies of 'patients' are deconstructed. A body is not dissected gratuitously in an anatomy course, but by the end, the physical integrity of the body has not been maintained. In the clinical setting, students sometimes interact with patients solely for educational gain, but this is in the larger context of a doctor–patient relationship that aims to benefit the patient. In the anatomy lab, the focus is solely education. In patient care, the ethical principle of beneficence makes patient welfare the ultimate goal, but in cadaver dissection, the student's education is the ultimate goal. While the doctor–patient relationship is meant to be one of giving, the student–cadaver relationship is one of taking. The Kantian Imperative that we treat people as ends rather than mere means is embodied in contemporary medical practice through respect for persons. Students are expected to embrace this principle when it comes to patients, but in the student–cadaver relationship, the cadaver can only be treated as mere means because the cadaver itself does not have autonomy. Thus, there is incongruity between what we are calling a patient, someone meant to be treated as ends, and a cadaver, an entity that can only be treated as means.

## THE ANATOMY LAB AND LEARNING TO COPE WITH EMOTIONS

The most striking difference between an anatomy course and clinical work is the distinctive set of emotions first year medical students experience in anatomy compared with those physicians experience in daily practice. There are two aspects to this. First, anatomy dissection may trigger new, complex emotions that can create a stressful cognitive dissonance for students. Second, students experience these emotions in tandem with their first set of evaluations in medical school, so they are learning how

to cope with them in a way that will allow them to behave appropriately in a new professional setting. This is important to acknowledge as we consider how the word 'patient' creates a parallel between the two environments.

One reason dissecting a cadaver is an emotionally complex experience is because it is many students' first interaction with a dead body, and for those whom it is not, interacting with the cadaver may rekindle feelings from other experiences with death. Many studies document these consequences.<sup>13 14</sup> In addition, at this first intimate exposure to death, students must dissect and take the body apart into pieces, an act that violates cultural norms of respect for the human body.<sup>14</sup> The dissection experience may produce emotional distress as it 'raises disturbing questions about life, death and dying'.<sup>15</sup>

For some, cadaver dissection is not a major emotional challenge; many students feel well prepared and enjoy dissection. Yet, the literature documents that a significant number of students can experience apprehension, anxiety and mental distress.<sup>14-17</sup> Many students may feel a complex combination of emotions they never have before: students may be fascinated and excited to learn but also apprehensive and uncomfortable. The anatomy lab represents a significant emotional challenge, tangibly connected to the dissection of a dead body.

While dealing with this new emotional challenge, students also face academic evaluation. Faculty know about and encourage this aspect of the lab environment, seeing the setting as an 'opportunit[y] for students to display such aspects of professionalism as responsibility/accountability for actions, working with others, respect for patients, and social responsibility'.<sup>18</sup> Students are encouraged to be professional because from early on they know they will be 'monitored and evaluated'.<sup>18</sup> Expectations in anatomy lab are not limited to knowledge on exam; students are ever aware of the evaluation of their work, attitude and dynamic within the group. In order to pass the course, students must demonstrate professionalism *despite* emotions they may experience.<sup>16</sup>

Given the evidence that the anatomy course can be a distressing experience, course directors have made efforts to find ways to help students better cope with their emotions. Studies have shown that discussions, postcourse ceremonies and creative projects such as posters or writing assignments can reduce stress experienced by students throughout the course.<sup>19-22</sup> While course directors have begun to implement such initiatives, as most of these programmes are voluntary and held in the midst of a course where students must focus on studying and completing dissection, they are not necessarily as efficacious as they could be. Although officially there may be options for students to deal with their emotions in a group space, strong social and academic pressures encourage students to instead focus on succeeding in dissection and thus cope with their stress individually.

Another way course directors attempt to alleviate stress is through instructing students they may leave the dissection room if they feel overwhelmed. By encouraging students to leave the room if they are emotional, certain feelings are deemed inappropriate for the space. In order to re-enter the space, students must suppress explicit displays of emotion. This structure reinforces the idea that only a layman reacts emotionally to a deceased human body; the professional anatomists' behaviour in the lab, unaffected by dissection, reinforces this. While an overly emotive response is also not professional in the clinical setting, students are not taught what to do when outside the dissection room to cope with these emotions. The adjustment to dissection is not effortless or automatic, yet the timeline for

dissection completion and a students' ability to master the material creates an environment in which it must be.

The result is that the students experience and cope with emotions about dissection privately. They are not taught these coping mechanisms; rather, students devise ways to deal with these emotions individually. Some of these coping strategies have been documented and include cultivating a scientific attitude, suppressing feelings to maintain objectivity, objectifying the body, joking and avoiding empathy.<sup>14 17 19</sup> These coping strategies result in behaviour characterised as 'detached concern', which allows students to dissect a human body while maintaining a level of psychological well-being. The concept of detached concern as a product of the hidden curriculum is a well-documented phenomenon.<sup>23</sup> The implications of adopting this practice are not currently agreed on; while there are some that endorse this practice as a necessary component to providing objective, complete care, there are others that find that this practice does not allow for physicians to view the patient as a whole person.<sup>23</sup> Whether detached concern is a viable approach to working with patients, this was not an established intention with the adoption of the word 'patient' to describe a cadaver.

## THE ETHICAL ISSUE

The paramount ethical issue with equating the cadaver-student relationship to the patient-doctor relationship is that the values and habits learnt in anatomy lab are explicitly discouraged in the clinical setting, but using the term 'patient' to describe a cadaver may implicitly encourage students to transfer those habits from anatomy lab to patient care. Though we want physicians to see patients holistically, students only know cadavers by their cause of death. Physicians should collaborate with their patients and focus on satisfaction, but the cadaver-student relationship is one sided and paternalistic. In anatomy lab, students develop detached concern, but this practice does not have a consensus on whether it is desired in the clinical setting. Calling a cadaver 'patient' equates clinical work with cadaver dissection, plausibly teaching students that the values they learn in anatomy lab can be transferred to the clinical setting. Ultimately, the effort to help students develop the habits and dispositions of ethical doctors through calling cadavers 'patients' may not achieve this goal—it may undermine it. This claim is empirically verifiable, and scholars may consider conducting a study to test its validity.

## SUGGESTIONS

Adopting the word 'patient' to describe a cadaver was meant to support the goal of developing ethical, humanistic physicians, but this paper suggests this decision did not consider the implications of creating a parallel between the dissection lab and the clinical environment. There are other lexical options that can achieve the same goal without risking implicit unethical lessons.

There have been studies researching other phrases that could be applied to a cadaver in order to foster respectful attitudes in the dissection lab. Medical students in Thailand have always been encouraged to think of the body donor's status as a 'teacher' rather than a patient. These students respect their donors as 'ajarn yai', or 'great teachers', a highly regarded status in Thai culture and Buddhism.<sup>24</sup> Two ceremonies are done, before dissection for the dedication and after dissection for gratitude and cremation, to define the ethical environment in which these cadavers will be dissected.<sup>24</sup> In the dedication ceremony, each donor name is read aloud and given the title of *arjan*.<sup>24</sup> This is how cadavers are referred to throughout the course, which helps students develop

a personal relationship with their body donors based on the same gratitude and respect that is afforded to highly regarded teachers.<sup>24</sup> A University of Michigan study found that 84% of students agreed that the body as teacher approach would be more effective in engendering respect and empathy towards the body while also facilitating emotional development.<sup>24</sup> By calling donors ‘teachers’, students afford them respect and empathy without equating the complex experience of anatomy lab with clinical practice. More empirical studies should be done to determine a word for these cadavers that could accomplish the ethical goals course directors have for anatomy.

In addition, not calling cadavers ‘patients’ might reduce the current taboos in anatomy lab by diminishing the presumption that the emotional experiences in anatomy lab are transferrable to the clinical setting. By emphasising that the two settings are not analogous, there is an opportunity to teach students about professionalism and still acknowledge the anatomy lab’s complex context through discussions. This is important because studies have shown that increasing discussion *about* anatomy lab decreases the apprehension and anxiety students may feel *during* dissection.<sup>24</sup> Dissection, because of its status as an experience possibly filled with deep emotional conflict and anxiety, still represents a valuable opportunity for medical educators to present students with behaviours and attitudes they consider worthiest of the medical profession. This strategy enables them to do their work without denying an integral part of their being and establishes an enduring approach to professional life. When students learn to discuss death and dissection, they may develop healthier psychological responses and habits that will benefit them later in actual patient care.

## CONCLUSION

Ultimately, reframing the cadaver–student relationship is an opportunity for course leaders to teach students to respect the body and acknowledge the ethical complexities of medical education. Dissection has survived many cultural shifts, but it has had to evolve. The anatomy course may continue to change, but ‘the “unchanged” should be our enthusiasm and responsibility in giving the best education to our students’.<sup>1</sup> Donors sacrifice their bodies for the sake of educating medical students about the body. Instead of calling them ‘patients’ as a way of humanising them, we should refer to them as what they are: donors of educating bodies and altruistic persons that gave themselves to science for us to learn. Our relationship is one of taking, not giving, and we can acknowledge the donors and humanise them through our gratitude.

**Collaborators** Paul Cummins, PhD.

**Contributors** The sole author is responsible for the conception, drafting and final approval of this article.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; externally peer reviewed.

## REFERENCES

- 1 Leung KK, Lu KS, Huang TS, *et al.* Anatomy instruction in medical schools: connecting the past and the future. *Adv Health Sci Educ Theory Pract* 2006;11:209–15.
- 2 McLachlan JC, Bligh J, Bradley P, *et al.* Teaching anatomy without cadavers. *Med Educ* 2004;38:418–24.
- 3 Granger NA. Dissection laboratory is vital to medical gross anatomy education. *Anat Rec B New Anat* 2004;281:6–8.
- 4 Elizondo-Omaña RE, Guzmán-López S, García-Rodríguez ML. Dissection as a teaching tool: past, present, and future. *Anat Rec B New Anat* 2005;285:11–15.
- 5 Parker LM. Anatomical dissection: why are we cutting it out? Dissection in undergraduate teaching. *ANZ J Surg* 2002;72:910–2.
- 6 Collins TJ, Given RL, Hulsebosch CE, *et al.* Status of gross anatomy in the U.S. and Canada: dilemma for the 21st century. *Clinical Anatomy* 1994;7:275–96.
- 7 Stevens CD. Repeat and replace? A note of caution for medical school curriculum reformers. *Acad Med* 2018;93:1425–7.
- 8 Gregory SR, Cole TR. MSJAMA. The changing role of dissection in medical education. *JAMA* 2002;287:1180.
- 9 Tank PW, Grant JCB, Sauerland EK. *Grant's dissector*. 15th edn. Philadelphia: Lippincott Williams & Wilkins, 2013.
- 10 Tank PW, Grant JCB, Sauerland EK. *Grant's dissector*. 13th edn. Philadelphia: Lippincott Williams & Wilkins, 2005.
- 11 Hafferty WF. *Into the Valley: death and the socialization of medical students*. New Haven, Conn: Yale University Press, 1991.
- 12 Lempp H, Seale C. The hidden curriculum in undergraduate medical education: qualitative study of medical students' perceptions of teaching. *BMJ* 2004;329:770–3.
- 13 Charlton R, Dovey SM, Jones DG, *et al.* Effects of cadaver dissection on the attitudes of medical students. *Med Educ* 1994;28:290–5.
- 14 Dinsmore CE, Daugherty S, Zeitz HJ. Student responses to the gross anatomy laboratory in a medical curriculum. *Clin Anat* 2001;14:231–6.
- 15 Bertman SL, Marks SC. Humanities in medical education: rationale and resources for the dissection laboratory. *Med Educ* 1985;19:374–81.
- 16 Finkelstein P, Mathers LH. Post-traumatic stress among medical students in the anatomy dissection laboratory. *Clinical Anatomy* 1990;3:219–26.
- 17 Penney JC. Reactions of medical students to dissection. *Academic Medicine* 1985;60:58–60.
- 18 Swartz WJ. Using gross anatomy to teach and assess professionalism in the first year of medical school. *Clin Anat* 2006;19:437–41.
- 19 Böckers A, Baader C, Fassnacht UK, *et al.* Reduction of mental distress in the dissection course by introducing the body donor experience through anatomical demonstrations of organ systems. *Anat Sci Educ* 2012;5:321–9.
- 20 Shapiro J, Nguyen VP, Moura S, *et al.* Relationship of creative projects in anatomy to medical student professionalism, test performance and stress: an exploratory study. *BMC Med Educ* 2009;9:366–72.
- 21 Boeckers A, Brinkmann A, Jerg-Bretzke L, *et al.* How can we deal with mental distress in the dissection room?—An evaluation of the need for psychological support. *Ann Anat* 2010;192:366–72.
- 22 Fox R, Lief H. Training for “detached concern”. In: Lief H, ed. *The Psychological basis of Medical Practice*. New York, NY: Harper & Row, 1963.
- 23 Winkelmann A, Güldner FH. Cadavers as teachers: the dissecting room experience in Thailand. *BMJ* 2004;329:82.
- 24 Bohl M, Bosch P, Hildebrandt S. Medical students' perceptions of the body donor as a “first patient” or “teacher”: a pilot study. *Anat Sci Educ* 2011;4:208–13.
- 25 Smith AC, Kleinman S. Managing emotions in medical school: students' contacts with the living and the dead. *Soc Psychol Q* 1989;52:56.